

SAMSUNG

Expansion into Digital



SNS-400/100 User's Manual

Thanks for purchasing the SNS-400/100.

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

English

iPOLiS

A brand that is integrated into Samsung's network products, ***iPOLiS*** stands for a convenient world (Polis) made safe (Police) through Samsung's superior network performance(Internet protocol). With ***iPOLiS*** products' clear digital images transmitted over the internet, real-time monitoring is possible anywhere with an internet connection. Easy remote control functions and the use of existing networks minimize installation costs. With ***iPOLiS***, experience a world of convenience connected anytime, anywhere.

Preface

Thanks for purchasing the SNS-100/400 Network Server.

This is a user instruction manual for high resolution D&N network server and the product mentioned here designates the high resolution D&N network server.

The user who installs and operates the product should be aware of this manual and other manuals referred to by this manual before installation and operation for proper use.

This manual and the software and hardware explained here are protected by copyright law.

Therefore, the copy, reprint and translation to other languages in parts or full of this user manual without the express written consent of SamsungTechwin Co., LTD are not allowed aside for general use within the scope of the copyright law.

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For more information on network manager program, please see network manager quick guide and manual file enclosed with CD.

Note to User

This machine's electromagnetic waves have been registered as suitable for business purposes; the retailer and consumer should be aware of this registration. If in the case of wrongful purchases, please exchange the product for a home use product.



Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

FCC Compliance Statement

Caution : Any changes or modification in construction of this device which are not expressly approved the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which cause the user will be required to correct the interference at his own expense.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in the European Union and other European countries with separate collection systems) This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Product Warranty and Limitations

The manufacturers of this product are not liable for anything related to sales of this product and do not consign third parties with any authorities that would make them held responsible instead of the manufacturer.

The product warranty does cover accidents, negligence, abuse, or improper use for the product in whole or in any parts. Additionally, the manufacturer does not provide warranty for any additional parts or pieces that were not supplied by the manufacturer.

The warranty is valid for one year from the purchase date. During the period, the warranty does not cover the malfunctions in the below areas.

- Malfunction due to user's negligence
- Dismantlement or replacement by the user
- Connection to alternate power source
- Malfunction due to natural disasters (fire, flood, tsunami, etc.)
- Replacement due to wear and tear
- Instability of network

Warning Symbols

Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.



Danger :

Misuse or wrongful operation of the product may result in death, injury or bring about other fatal results. It indicates absolute caution when operating.



Caution :

Misuse or wrongful operation of the product may result in slight injury or damage to the product. It indicates caution when operating.



Note :

Indication that the user needs to be aware of certain matters, or will find matters helpful in operating the product.

Warning



Before Setup

- Please set up the proper voltage before connecting to power source.
- Please be sure the power is turned off before setup.
- There is risk of shock or fire; be sure to avoid setup in places with high humidity.
- To prevent shocks, please connect the ground wire.
- Unauthorized assembly forbidden.
Assembly requires experience and technical skills, and unauthorized assembly has fire and shock risks. Always contact one of our agents for assembly. .
- Do not install on an unsteady surface.
There are risks of falling.

During Use

- When opening the product cover, there is a risk of electric shock. Only a professional should open the cover.
- Please use only in an environment with standard temperature and humidity.
- Please do not plug in multiple products to a power source; it is often the cause of fires.
- Please do not place water or heavy objects on the product; it is often a cause of malfunction.
- Please do not use in a location with propane gas, gasoline or other flammable substances to avoid risk of explosion or fire.
- Please do not touch the power plug with wet hands to avoid electric shock.
- Do not pull on the power plug with too much force; a damaged plug may cause electric shock or fires.
- Do not connect the RJ-45 cable to a terminal by constraint.
- Stop use in the case of smoke or irregular heat.
It may cause fires.
- Random replacement of built-in lithium battery with other types of batteries may cause explosion. The battery must be replaced by the same battery. The used batteries shall be disposed carefully because they can cause environment pollution.
- It is dangerous to put the battery in fire, heat or short circuit it.
- Do not use batteries by recharging them.

Disassembly and Cleaning

- There is a risk of malfunction, shock or other dangers. Please do not disassemble or attempt to fix the product.
- To prevent malfunction or shock, please do not use a wet cloth or oil-based cleaning product to clean the product exterior. Clean the exterior of the product with a dry cloth.

Caution



- Do not install under extreme temperature conditions
Use only under temperature conditions between -0°C and +40°C. Provide good ventilation when using in high temperature conditions.
- Do not drop and avoid shocks and vibration.
This may cause malfunctions.
- Do not install in areas exposed to rain, water or radiation.
Moisture inside of the product may cause malfunctions.
- Do not disassemble the product arbitrarily.
After services will not be provided for arbitrarily disassembled products.
- Please check the created network place first, before trying to connect to a network.
- Please use only the power adapter that is provided with the product.
- Please check national laws to be sure that using the product for monitoring purposes is not illegal.

Ch1. SNS-100/400 Network Server Overview

1.1. Introduction

The SNS-100/400 is a high-tech network server that uses MPEG-4 codec technology to allow high compression rates and clear picture quality by allowing for high frame rates to be transmitted through the network.

By using the network, remote connection, monitoring, and control is possible from any location for simple use; additionally, set-up requires only a network.

The SNS-100/400 network server utilizes embedded software solutions (Embedded Web Server, Embedded Streaming Server, Network Protocol) developed by SamsungTechwin, and guarantees performance and safety while offering various solutions through Internet integration.

1.2. Features

○ Monitoring Screen

It sends real-time 120fps MPEG-4 data and shows single and partitioned screens (partition screen available only for SNS-400).

The monitor output supports 1 composite unit.

○ Screen Text Display Functions

Using the texts displayed on the monitor screen, the camera functions can be adjusted.

○ Motion Detection

Even without an external motion sensor, this product detects motion and sends a signal. Therefore, by connecting to the alarm device, monitoring can be performed much more efficiently.

○ Alarm and interoperation

Motion Detection function is interoperated with Alarm, pictures can be transmitted via e-mail or FTP.

○ USB Recording/Search

When a USB memory device is attached to the server, events can be recorded and the recorded events can be searched directly from the webpage.

○ High Data Compression Rate

The high data compression rate based on the MPEG-4 allows high speed transmission and even from the same network bandwidth, it can send relatively more frames.

○ Bi-directional audio and video transmission

Video and bi-directional audio can be transmitted in real time and recording and playing are possible through the network manager installed on user's PC.

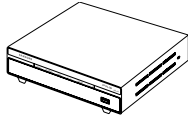
○ Additional Functions

- NTSC/PAL auto detect and PTZ control is available.

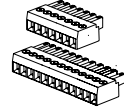
Ch2. Product Description

2.1. Components and Accessories

- **Server Main Frame**



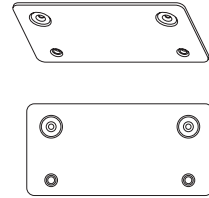
- **I/O Connection Terminal**



- **Users Manual / CD / Quick Guide**



- **Wall Bracket**



- **Cross Cable**

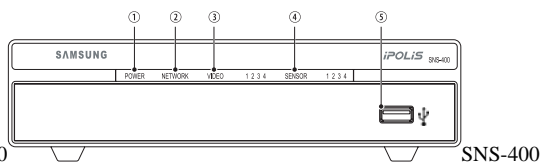
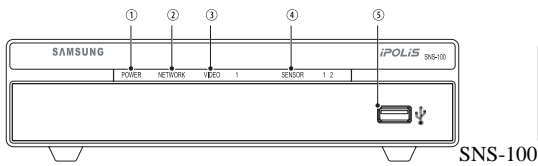


- **DC 12V Adapter**



2.2. Part Names

2.2.1. Front



① POWER

Shows whether server power is connected.

② NETWORK

When Network LED flickers, it means that the network is operating normally.

③ VIDEO

Displays whether video input is detected.

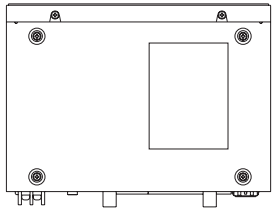
④ SENSOR

Shows SENSOR input.

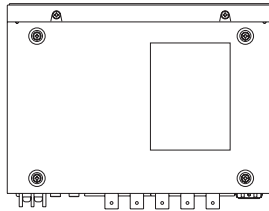
⑤ USB

USB terminal.

2.2.2. Bottom



SNS-100

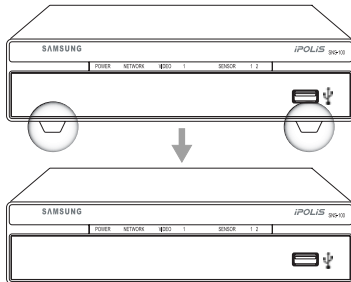


SNS-400

⑥ WALL BRACKET Connection

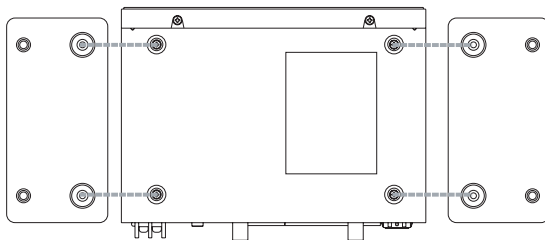
Use this when fixing the product to the WALL BRACKET. Use the WALL BRACKET as seen in the below figure.

- Remove the Foot on the bottom and connect the support to the WALL BRACKET.

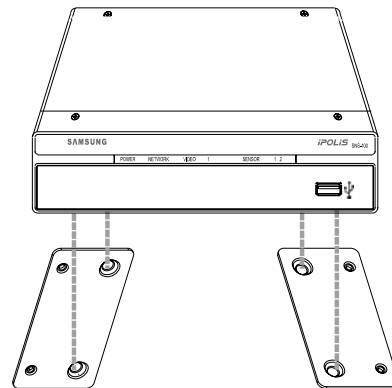
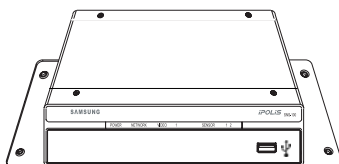


- SNS-100 Bottom Connection Diagram

SNS-100 Dimensional Connection Diagram



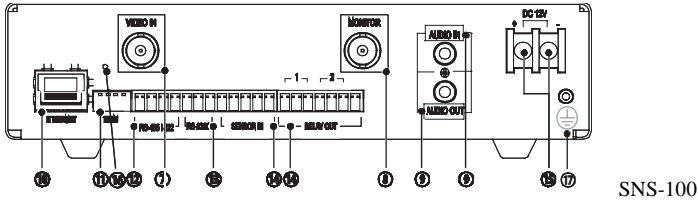
- With Wall Bracket attached



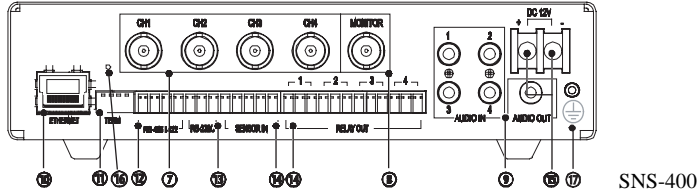
Caution

The Wall Bracket is provided together with the server. When installing support, please see the above user's manual.

2.2.3. Back



SNS-100



SNS-400

⑦ Video Input

Server's BNC video input connection terminal.

⑧ Video Output

Server's BNC video output connection terminal.

⑨ Audio Input/Output

IN: Audio input terminal where sound is entered to the network server. Accessories such as microphones can be connected here.

OUT: Audio output terminal where sound comes out from the network server. Accessories such as speakers can be connected here.

⑩ ETHERNET

Connects to 10/100 Mbps Ethernet. Use standard RJ-45 connectors to connect to Ethernet.

⑪ TERM SWITCH

The switch named TERM is for selecting the RS-485/422 connection and turning the termination resistor on and off.

- RS-485 select (ON: 1, 2)
- RS-422 select (OFF: 1, 2)
- Apply termination resistor (ON: 3, 4)

⑫ RS-485/422

Installs serial cable connected to camera that controls pan/tilt/zoom functions.

⑬ RS-232C

Connection terminal to RS 232-C communication device.

⑭ ALARM

Alarm Input (I): Connecting infrared sensors or other external sensor equipment.

Alarm Output (O): Connecting bright light, or other relay equipment.

⑮ Power

Terminal for connecting designated power.

⑯ Reset

When pressed for 5 seconds, all settings are initialized.

⑰ Grounding

Terminal for grounding product.



For the sake of safe activation, we recommend to use a grounding cable and connect the grounding terminal and cables at the back of the product.

2.3. Recommended PC specifications

Items	Specifications
CPU	Pentium IV 3.0GHz or higher processor
Main Memory	1GB or higher RAM
HDD	More than 120GB when recording
VGA	128M or higher recommended
OS	Window 2000, XP, 2003, Vista
Web Browser	Internet explorer 5.5 or higher
Resolution	1024*768 or higher
Network	10/100 Base-T Ethernet
DirectX	9.0C or higher

Ch3. Installation and Setting

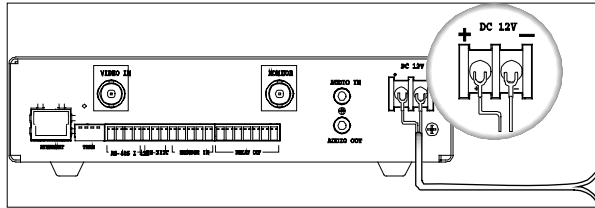
3.1. Power Input

■ DC Power

Only DC12V power may be supplied to this product.

When using an adapter different from the one supplied by us (DC12V/4A), make sure that it is DC12V/2A or higher.

■ DC Only



For SNS-400, the recommended adapter specs are DC12V/2A, therefore, only use standard adapters.

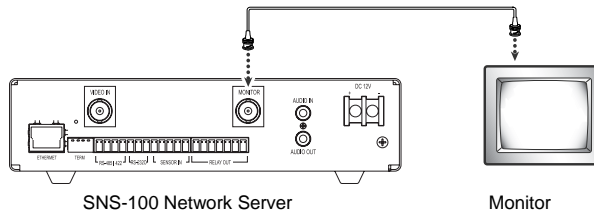
Chart 3-1 When the copper wire's resistance is [20°C (68°F)]

Copper Wire Size (AWG)	#24(0.22mm ²)	#22(0.33mm ²)	#20(0.52mm ²)	#18(0.83mm ²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
DROP Voltage(V/m)	0.028	0.018	0.011	0.06

- As seen in Chart 3-1, a voltage drop occurs and thus, in the case that the adapter output wire's length is excessively connected to the network, a problem can occur with the network server.
- ※ Server Operation Voltage: DC 12V±10%
- ※ Depending on the type and manufacturer of the voltage load wire described in the above chart, there may be a deviation.

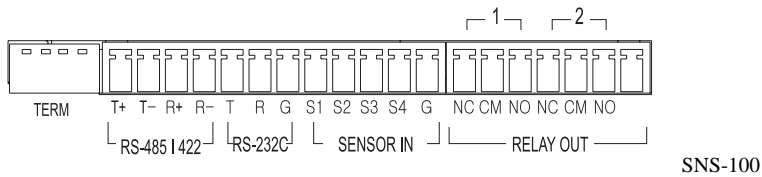
3.2. Connecting to Monitor

Connect the video output terminal on the back of the product to the monitor input terminal.

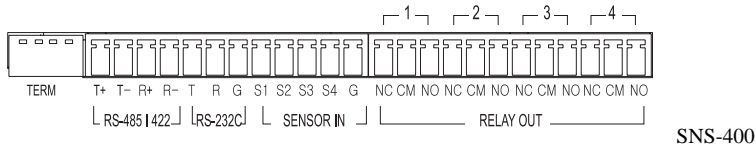


- Connection methods may differ depending on the used monitor and peripheral devices, so please refer to the users' manual.
- Always connect after turning the device's power off.

3.3. Connecting to External Control Terminal



SNS-100

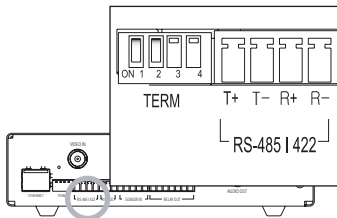


SNS-400

The input sequence of the terminal from the left is TERM, RS-485/422, RS-232C, SENSOR IN and RELAY OUT.

Use a ‘-’ driver to loosen the I/O connection terminal and remove the wire covering. After pushing in the removed portion, fixate it by tightening the screw.

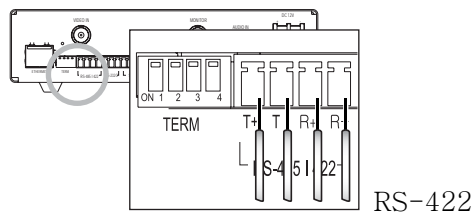
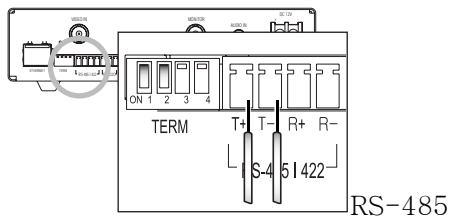
■ RS-485/422 Connection



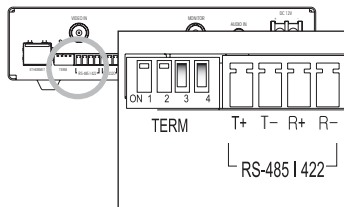
■ RS-485/422 according to TERM SWITCH connection

TERM	ON	OFF
1,2	RS-485	RS-422
3,4	Termination Resistor ON	Termination Resistor OFF

■ RS-485/RS-422 Connection

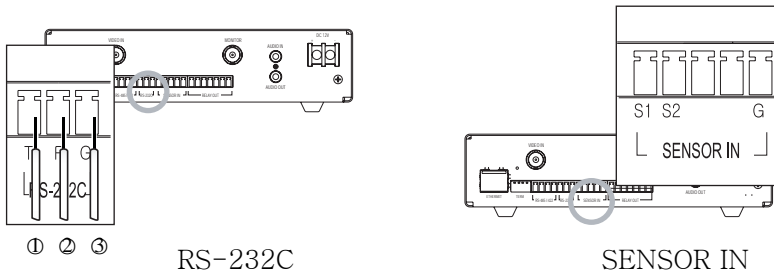


■ Termination Resistor Connection



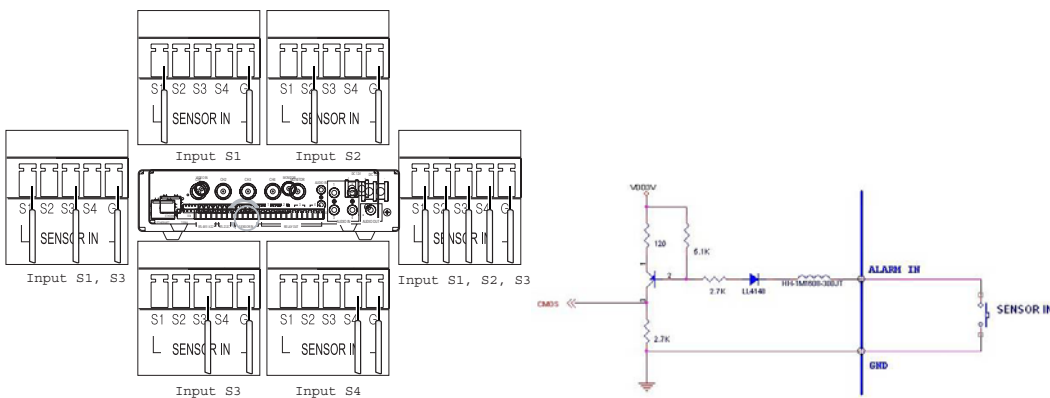
■ **RS-232C/SENSOR IN Connection**

Connect the RS-232C/SENSOR IN terminal and use as shown below.



SENSOR IN	S1	S2	S3	S4	GND
1 Input	O	-	-	-	O
2 Input	-	O	-	-	O
3 Input	-	-	O	-	O
4 Input	-	-	-	O	O
1, 3 Input	O	-	O	-	O
1, 2, 3, 4 Input	O	O	O	O	O

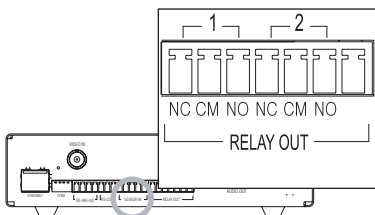
For SNS-400



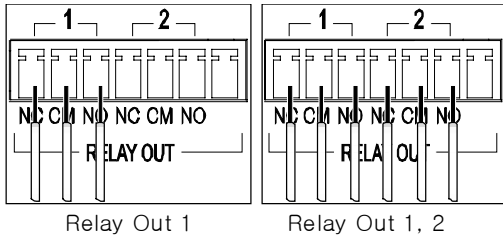
- In case of selecting Normal Open at setup menu:
In case of contact type, it is short and in case of active type, sensor input acts at “LOW” level.
- In case of selecting Normal Close at setup menu:
In case of contact type, it is open and in case of active type, sensor input acts at high impedance status(open collector).

■ **RELAY OUT Connection**

Connect the RELAY OUT terminal and use as shown below.



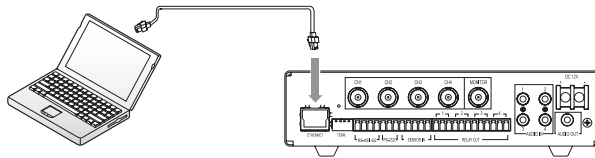
RELAY OUT	NC	CM	NO
Normal Close	O	O	-
Common	-	O	-
Normal Open	-	O	O



3.4. Network Configuration and Connection Method

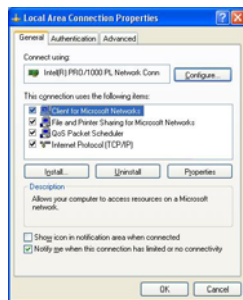
3.4.1. Configuration/connection using Web page

1. Please connect user's PC to SNS-100/400 network server using cross cable.

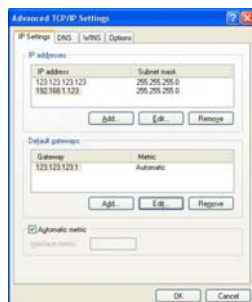


Note

To configure network, the internal IP must be registered in the user's PC.

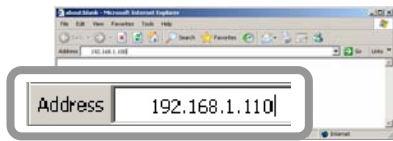


After pressing internet protocol (TCP/IP) properties, press the 'advanced' button to go into advanced configurations.

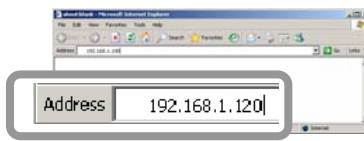


- Add with 192.168.1.XXX.

- Please launch Web browser on user's PC and enter the below IP address and press the <Enter> button. Connect to Webviewer login window of SNS-100/400 network server.



SNS-100 default address



SNS-400 default address

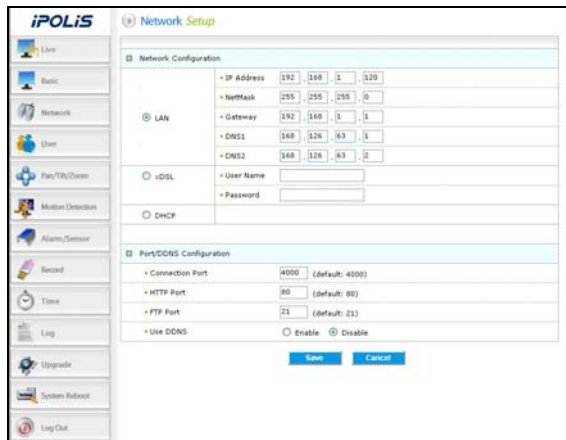
- Please login with administrator's authorization and move to 'Setup-Network' page.



Note

The initial ID and password is ID: admin, PW: 11111111

- Please configure according to the network environment where SNS-100/400 network server will be installed and push <Save> button to save the configuration.

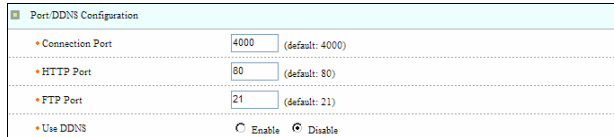


① LAN / xDSL / DHCP Configuration

	• IP Address	192	.	168	.	1	.	120
	• NetMask	255	.	255	.	255	.	0
• LAN	• Gateway	192	.	168	.	1	.	1
	• DNS1	168	.	126	.	63	.	1
	• DNS2	168	.	126	.	63	.	2
• xDSL	• User Name	<input type="text"/>						
	• Password	<input type="text"/>						
• DHCP								

Item	Description
LAN Use	When network product is connected to normal local LAN or when connected to static IP, the network data to be allotted to the IP is configured.
xDSL	When using xDSL dynamic IP, enter the ID and PW.
Video Quality	When automatically receiving IP through DHCP server, the DHCP functions are activated. 'DHCP' is used in the LAN environment where the DHCP is activated. Generally, for mid/large scale, DHCP servers are operated through LAN and for small-scales, IP sharers use DHCP functions.

② Port Configuration



Port DDNS Configuration

- Connection Port: (default: 4000)
- HTTP Port: (default: 80)
- FTP Port: (default: 21)
- Use DDNS: Enable Disable

Item	Description
Port Setting	The connection port and http, ftp port configurations can be set here and the DDNS use can be checked.



Use DDNS changes its IP address every time the user attempts to connect to the ISP and when the product is connected to a cable modem or xDSL modem. In this case, the user cannot know the changed IP address. When a product that uses dynamic IP is registered on the DDNS server, when wishing to connect to the product, the changed IP address can be easily recognized. In order to register the IP address to the DDNS server, set Use DDNS as Enabled.

Ch4. How to Use Web Viewer

4.1. How to Use Web Viewer

4.1.1. Login

To connect to the login page, click the 'move to Webpage' button on Network Manager or enter SNS-100/400 network server IP address on the internet web browser and press the enter key.



Enter user ID and password and push <Login> button, it then moves to the appropriate Web page.



Note

Default value is ID: admin, PW: 11111111

If you click <Guest> button, it moves to WebViewer page under the Guest authenticated status. However, administrator has to permit guest access for this.



Note

If you logged in first in administrator mode, please change the password of administrator. It can prevent other users from connecting to the administration page.

4.1.2. Web Viewer Screen

Web Viewer screen is composed of menu area for video configuration and screen area for displaying input video.



■ **Controls**



Flip Image

Vertical reversal of channel screen



Stretch Image

When selecting resolution with Half D1 and CIF, stretches channel screen to resolution D1 size.



Save Image

Saves channel screen to 'JPEG file'.



Quad

4 Converts to 1 split / 4 split screens (applied only to 4 channel server)



Channel

Video server channels (applies only to 4 channel servers)
- CH1 ~ CH4

Compression

Video compression mode (the mode of compressing video)
- MPEG, JPEG

Resolution

Video resolution (the size of video screen transmitted)
- NTSC : D1(704x480), Half D1(704x240), CIF(352x240)
- PAL : D1(704X576), Half D1(704X288), CIF(352X288)

Frame Rate

The number of maximum video frames transmitted per second.
- Designated by user between 1 ~ 30

Quality

Video quality setting
- Very High, High, Middle, Low, Very Low



Pause

Stops image temporarily.



OSD

Displays related OSD information.



Displays the title

Removes the title



Deinterlace

On/off function of Deinterlace.



Screen where Deinterlace is not applied



Screen where Deinterlace is applied



Note Deinterlace is a function to adjust the video quality softly by eliminating the border line which was made by an interlace function. The interlace function draws an even line and an odd line of the Image one after the other.



Camera Setup

Pop up button for adjusting camera OSD.



Camera OSD control button is displayed



Camera OSD is displayed

Instruction for Camera OSD control button



<↑>, <↓> button

Moves selection displaying arrows up and down on camera OSD menu.

<←>, <→> button

Changes configuration of selected field on camera OSD menu.

<Set> button

Used when moving to a selected field's lower menu or when setting a selected item.

<Exit> button

Used when going to the upper menu of a selected field or when terminating OSD.



Caution Camera can be controlled only when connected to the RS-485's configuration communication terminal.



Note For camera configurations and configurations, please see the 'Camera Manual'.



PTZ Control

PTZ Control Functions



Screen where camera PTZ control window is displayed

- The left/right slide bar can control focus (left slide bar) / zoom (right slide bar)
- The “+” displayed in the middle can be pressed using the mouse as the base point of the Pan / Tilt and it will Pan /Tilt according to that point.

4.2. Using Administration Page

4.2.1. Initialization Screen after Connecting

When connection is successful, the below screen will be displayed.

The screenshot shows the iPOLIS administration interface. The left sidebar contains navigation icons for Live, Basic, Network, User, PTZ/Tilt/Zoom, Motion Detection, Alarm/Output, Record, Time, Log, Upgrade, System Status, and Log Out. The main content area is divided into two sections:

Video/Audio Settings

- Compression Type: MPEG JPEG
- Video Size: NTSC PAL CIF
- Video Quality: Very High
- Video Frame Rate: 30fps, 15fps, 10fps, 5fps
- Video Channel: Channel 1 Channel 2 Channel 3 Channel 4
- Audio-In Channel: Channel 1 Channel 2 Channel 3 Channel 4
- Audio-Out Channel: Use
- Max User Count: 10
- Mic Sensitivity: High Low

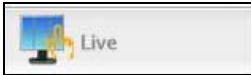
Product Information

Model	IPC-A10
Max Address	00:00:18:00:20:0A
Camera Name	cam (English Only)
Channel 1 Name	CH1cam (English Only)
Channel 2 Name	CH2cam (English Only)
Channel 3 Name	CH3cam (English Only)
Channel 4 Name	CH4cam (English Only)
Location	location (English Only)
Description	description (English Only)
Memo	memo (English Only)

Buttons: Save, Cancel

4.2.2. Live

Goes to Web Viewer Page.



[Web Viewer live screen]

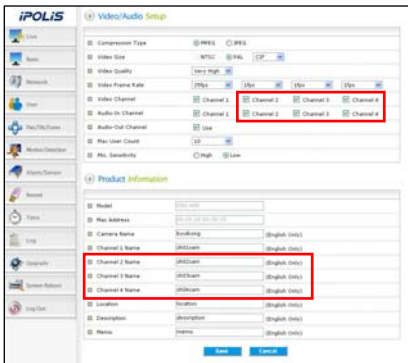


Note

In order to set detailed user menu, press the above setup menu button.

4.2.3. Basic

Configures basic information for the network server.



The boxes shown in red are configured only in SNS-400.

Video/Audio Setup

Item	Description
Compression Type	Video compression mode (Compression mode of video in the network server)
Video Size	Selects the screen size.
Video Quality	Selects the quality of video screen. In case of low speed internet, lower the video quality to see seamless video.
Video Frame Rate	Configures the number of transmitted frame per second in the camera.
Video Channel	Selects the video channel to be used in the camera.
Audio-In Channel	Selects whether to use the audio input channel in the camera or not.
Audio-Out Channel	Selects whether to use the audio output in the camera or not.
Max User Count	Configures the number of users who can be connected to the camera through the network(1~20 persons)
MIC Sensitivity	Audio amplifying function Configures Low for the microphone which has amplifying function and High for the microphone which has

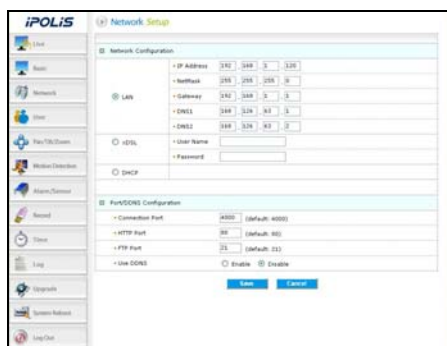
Item	Description
	no amplifying function. (In case of Line-In signal, configure Low)

Product Information

Item	Description
Model	Displays model name of the network server.
Mac Address	Displays MAC Address of the network server.
Camera Name	Configures name of the network server and it helps to classify several network servers.
Channel 1 Name	Network server's channel name can be set and when it is 4 channels, there are up Channel 1, 2, 3 and 4 names.
Location	Enters the place where the network server is installed.
Description	Enters the description for the network server and the related section.
Memo	Enters the contact information for the network server administrator.

4.2.4. Network

Configures the network data of the network server.



Network Configuration

According to the user's network environment, it is classified as LAN, xDSL or DHCP.

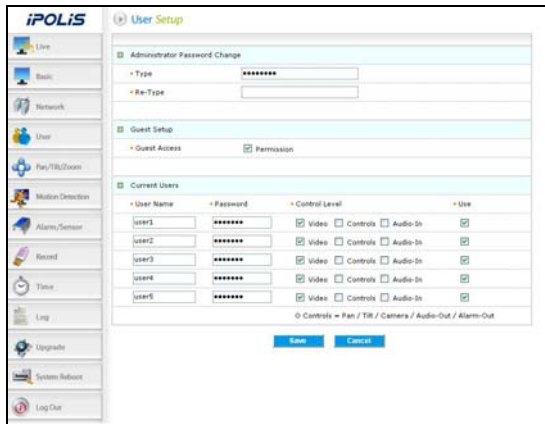
Item	Description
LAN	In case the network server is connected to the local network or xDSL with a static IP address, configure network information to be assigned to the network server.
xDSL	In case of xDSL with a dynamic IP address, enter password in User Name and Password field.
DHCP	This case is selected in case of using IP sharing box/ cable modem.

Port/DDNS Configuration

Item	Description
Connection Port	Port used for controlling communication with network server. (Default : 4000)
HTTP Port/FTP Port	Port used for connecting to network server's webpage and FTP functions. (Default : http=80, ftp=21)
Use DDNS	Choose whether you use DDNS server. IP address for dynamic IP can continuously change, but if you use DDNS, you can connect to the server regardless of the changing IP address.

4.2.5. User

This sets password change for administrator or user registration.



Item	Description
Administrator Password Change	Change password of administrator(The initial administrator password is 11111111)
Guest Setup	User clicks 'Guest' button to decide whether allowing guest to connect to Main Viewer from the login page.
Current Users	You can register new user or delete, and set up user's authority(applied only to 4 channel servers)

※ Setup User Authority

User's authorities set up at 'Current User' are as follows.

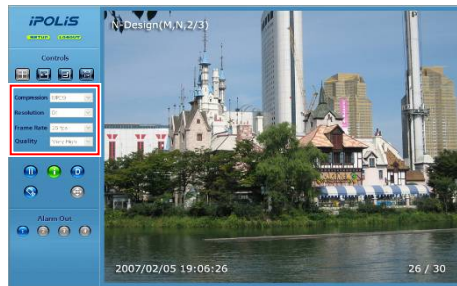
Item	Description
Video	Use video related setup function (Compression, Resolution, Framerate, Quality)
Controls	Pan, Tilt, Zoom, Audio output, Alarm output
Audio – In	Audio Input
Use	Whether relevant account is used(If not checked, log-in not permitted)

- **Example 1** In case control function is limited (Do not check Controls box)



- Pan, tilt, zoom, audio output, alarm output function icon is inactivated

- **Example 2** In case video function is restricted (When Video is not checked)



※ Compression, Resolution, Framerate, Quality set up icon is inactivated.

4.2.6. Pan / Tilt / Zoom

Configures items for the network server's PTZ functions.



Pan / Tilt / Zoom Setup

◇ PTZ Camera Configuration

Item	Description
Channel	Select channel where camera is installed (applied only to 4 channel servers)
PTZ Display	Set whether to display PTZ control tool on screen
OSD Display	Set whether to display OSD menu in camera
Preset	Register/use selected preset or delete registered preset
Swing	Set whether to activate in set swing mode
Group	Set whether to activate registered group mode
Device ID	Select ID allotted to camera and differentiate camera to be controlled
Mode	Select the connected camera's protocol per manufacturer and model



Note

- Pan/Tilt Swing group motions are supported only by our protocol.
- Up to eight different presets for the zoom camera are supported.

◇ RS485/422 Setup

Item	Description
Baud Rate	Set the data transmission speed per second
Data Bit	Set the data transmission bit
Parity Bit	Select error-check method when data is displayed
Stop Bit	Set insert bit when data transmission is completed



Note

When RS-485/422 setup configuration is incorrect, the PTZ camera motion may not work. See the users' manual for the connected camera and carefully configure it accordingly.

◇ Swing Setup

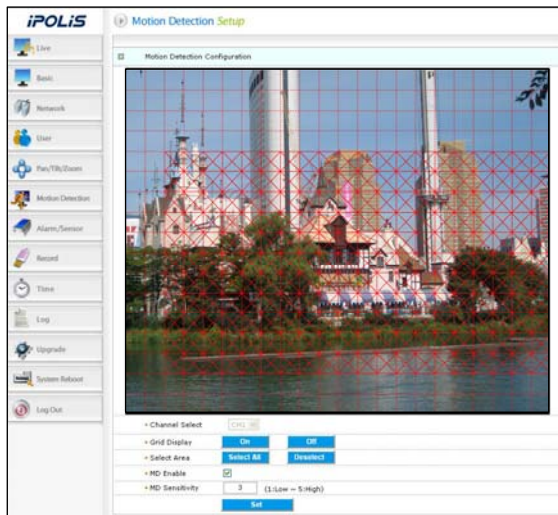
Item	Description
First Preset / Second Preset	Designate the two presets to be used in swing mode
Mode	Select movement method between the two points((Pan/Tilt Swing)
Speed	Set movement speed
Duration	Sets the stop time at one preset point

◇ Group Setup

Item	Description
Group No.	Sets the desired group number
Preset No.	Sets each point's preset number
Travel Speed	Sets the travel speed between each point interval
Dwell Time	Sets the stop time at each position

4.2.7. Motion Detection

This sets up motion detection function of the network server.



◇ Motion Detection Configuration

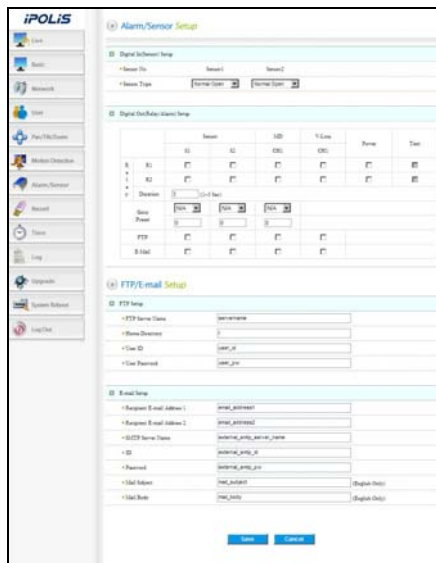
Item	Description
Channel Set	Used when selecting the channel. (Applied only to 4 channel servers.)
Grid Display	Basic grid, used to choose area on the screen, is displayed or hidden.
Select Area	When selecting motion detection area, click <Select All> button to select all areas, or click <Deselect> button to cancel the selected area.
MD Enable	Decide whether you use motion detection function.
MD Sensitivity	Setting up sensitivity to detect motion to adjust input video by situation. You can select 1-5, and 5 is the highest.



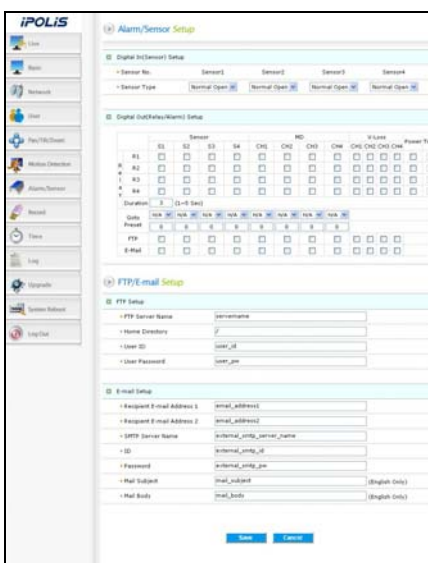
- After setting is complete, click the Set button to apply the settings.

4.2.8. Alarm/Sensor

This sets up necessary information when using alarm function by attaching sensor to network server.



For SNS-100



For SNS-400

Alarm/Sensor Setup

◇ Digital In (Sensor) Setup

Item	Description
Sensor Type	Types of sensors are 'Normal open' and 'Normal close.' This selects up type of connected sensor.

◇ Digital Out (Relay / Alarm) Setup

Item	Description
Relay	Set up Relay Out responding when event is recognized by connected sensor or Motion Detection (MD)
Duration	Set up time to operate relay. It defines the period from the time when sensor detects event to the time when relay is released.
FTP	In case event occurs by sensor or Motion Detection (MD) on the screen, decide whether transferring related information to FTP.
E-mail	In case event occurs by connected sensor or Motion Detection (MD) on the screen, decide whether transferring related information by e-mail.

FTP / E-mail Setup

Set up FTP server and e-mail information to which related information is transferred in case alarm occurs.

◇ FTP Setup

Item	Description	
FTP	FTP Server Name	Enters the FTP server or Domain IP address.
	Home Directory	Set up home directory to save relevant data at FTP server.
	User ID	Enter ID to connect FTP server.
	User Password	Enter PW to connect FTP server.

◇ E-mail Setup

Item	Description
Recipient E-mail Address 1	You can designate up to two e-mail address receiving data when alarm occurs.
Recipient E-mail Address 2	
SMTP Server Name	In case you use outside e-mail server, enter the name of the outside e-mail server.
ID	Enter ID to connect the outside e-mail server.
Password	Enter PW to connect the outside e-mail server.
Mail Subject	Enter the subject of mail to be transferred.
Mail Body	Enter the body of mail to be transferred.



If motion is detected, the contents transferred by e-mail or to FTP are varied according to the set-up of 'Video Compression' at Admin page (Basic).

- MPEG : Video length is set by 'Duration' of 'Digital Out (Relay/Alarm) Setup'. File extension is 'ste', you can play this by 'SLiM Player'.
- JPEG : JPG type image file attached.

4.2.9. Record



Record Page

Item	Description
USB Memory Size	Displays the entire capacity of the USB memory.
USB Memory Recordable Size	Displays the capacity possible for recording for the USB memory.
USB Memory Free Size	Displays the remaining capacity of the USB memory.
	Button for playing the video
	Button for stopping the video
	Button for pausing the video
	Save video as JPG file
Event Recording Video List	Event video list saved in the USB memory saves 5 seconds of pre-record and 5 post records.

**Caution**

USB memory must be attached before operating the system.
USB 2.0 memory sticks are recommended.

- Number of users possible for simultaneously using Record is limited to 1.
- During initial operation of the product, USB memory initialization begins and during initializing, the record function cannot be used.(1Gb: 2~3 minutes)

**Note**

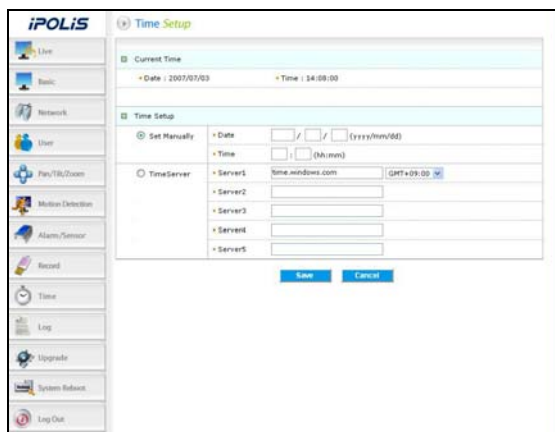
USB save function method.

- The file system supports FAT and FAT32
- It is saved in the SNS_DATA folder and depending on the usable capacity; the number and sizes of the files can change

USB save function specs.

- Interoperation with events (MD, V-Loss, Sensor)
 - Saves pre and post 5 seconds of the corresponding channel
 - MPEG (saves as set frame), JPEG (1 page / 1 second)
 - When audio is on, the audio is also saved
- REPEAT RECORDING
 - When all storage space is used, it deletes old save data and begins a new save cycle.
- Up to 1,000 events can be saved.
- It saves it in the same resolution as that of the LIVE screen (D1, HD1, CIF)
- SanDisk and TRANSCEND products are recommended for the USB memory.

4.2.10. Time

**Current Time**

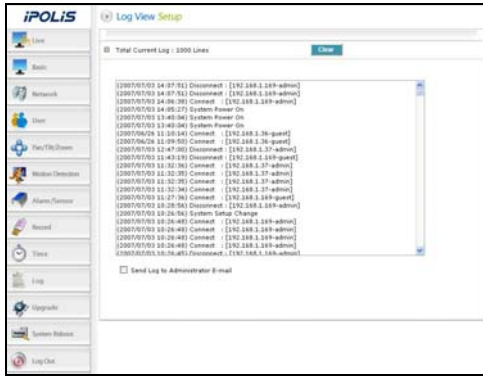
Item	Description
Date	Current setup date displayed on network server.
Time	Current setup time displayed on network server.

Time Setup

Item	Description
Set Manually	Adjust network server time manually.
Time Server	Set up address of time server for Server 1 - 5.

4.2.11. LOG

Recent activities made for network server are displayed in a log.



Item	Description
Clear	Delete logs.

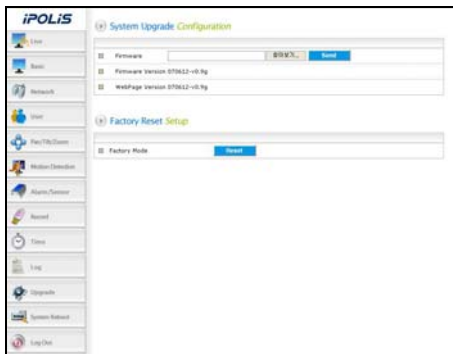


Note

When checking Send Log to Administrator E-mail, logs are sent to the administrator e-mail at 04:00

4.2.12. Upgrade

Upgrade program of SNS-100/400 network server.



System Upgrade Configuration.

Item	Description
Firmware	Upgrade firmware of SNS-100/400 network server.



Note

Upgrade methods are as shown below.

- Check current version.
- Press 'search' and select the latest version firmware file and press the 'send' button.
- When 'send' is pressed, upgrades are done and it automatically reboots.
- Lastly, check if it is changed to the latest version.



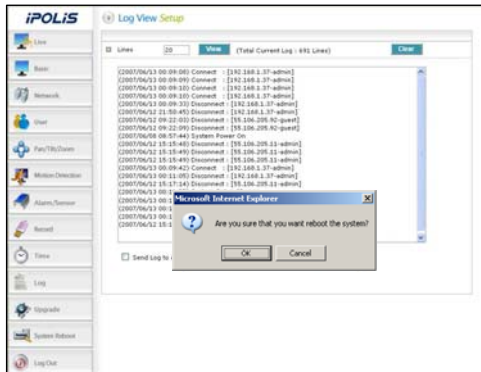
Caution

- Upgrades should be performed only by technicians.
- Always perform upgrades after connecting the product and PC with a cross cable.
- When the network is disconnected or power is turned off during upgrades, the product may be damaged.

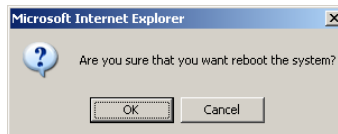
Factory Mode Setup

If you click <Reset> button, server is returned to initial value when shipped from the factory after confirmation procedure by administrator.

4.2.13. System Reboot



Server is rebooted after confirmation procedure of administrator.



Click <OK> button to reboot server.

Ch5. Troubleshooting

Before Calling for Malfunctions

If there are problems in operation, please refer to the items below. If the problem persists, please contact the agent you purchased this product from

Problem	Solution
Nothing appears on the screen.	<ul style="list-style-type: none"> ▪ Please check the power connection. ▪ Please check the video signal line connection. ▪ Check if there is anything wrong with the video signals entered to the network server. ▪ Open MS-DOS window to check whether SNS-100/400 network server is connected to the network. In case of ping 192.168.0.100, replace it with IP address set up at server ※ In case of ping 192.168.0.100, replace it with IP address set up at server.
The video image is not clear.	<ul style="list-style-type: none"> ▪ Please check if the lens is clean. Please clean the lens with a clean cloth or brush. ▪ Please adjust the contrast feature of the monitor. ▪ Please make sure that the screen is not exposed directly to bright light. Please move the angle or location of the image if necessary. ▪ Please readjust the back focus of the connected camera.
The screen is dark.	<ul style="list-style-type: none"> ▪ Please adjust the contrast feature of the monitor. ▪ Check if the terminals are properly set between the systems. ▪ Please check if an auto iris lens is being used and adjust the brightness level.
There is a problem with operations. The surface is too hot and black stripes appear on the screen.	<ul style="list-style-type: none"> ▪ Does the power supplied to the server sway away from standards or change depending on the time?
The MOTION DETECTION function is not working.	<ul style="list-style-type: none"> ▪ Please check if 'MOTION DETECTION' mode is turned on. ▪ Please check if the MD LEVEL is too low. ▪ Please check the setting of the MD AREA.
The screen flickers too much.	<ul style="list-style-type: none"> ▪ Check if the connected camera faces directly into the sun or lights. ▪ Check if the cables are properly connected.
Audio is not working	<ul style="list-style-type: none"> ▪ Please check the audio is selected from admin page. ▪ Please check speaker volume from the viewer. ▪ In case input sound through microphone at Viewer is not outputted through Audio Out of server, please check whether Audio Out channel is selected at admin page. Or check whether microphone is available at Viewer. ▪ Please check audio driver is working in user's PC.
Video is stopped	<ul style="list-style-type: none"> ▪ Please check whether network cable of SNS-100/400 network server is correctly connected. ▪ In case user uses hub or IP router, check whether these network equipments are working properly. ▪ Open MS-DOS window and check whether SNS-100/400 network server is connected to the network.
No image from web viewer	<ul style="list-style-type: none"> ▪ Click 'refresh (shortcut; F5) ' button at browser to recall the page ▪ Check whether power of server and network cable is properly connected. ▪ Check whether computer is connected to network. If you use a hub or router, check whether such equipments are properly operated. (Note: Open MS-DOS window and enter network server IP at ping 192.168.1.100.(120)) ▪ Connect to Admin page to check whether video output is selected.
No network connection from Network Manger, dedicated viewer Network Manger	<ul style="list-style-type: none"> ▪ Please check MAC address and IP address of SNS-100/400 network server. ▪ Check whether network cable is properly connected. (Note : Use ping command) ▪ Check whether connecting to Admin page is available.

Problem	Solution
Image transferred to FTP or by E-mail cannot be viewed	<ul style="list-style-type: none"> ▪ Video may not be viewed since Divx codec is not installed in user's PC. Divx codec can decode video compressed with MPEG4. Download and install the latest Divx codec, and check video. http://www.divx.com/divx/download
When camera cannot be controlled for Pan/ Tilt/ Zoom	<ul style="list-style-type: none"> ▪ Check the camera / speed dome protocol. ▪ See if the proper model and manufacturer is selected at the mode. ▪ Inspect the cables connected to the device.
When the contents stored on the USB memory does not appear	<ul style="list-style-type: none"> ▪ Make sure not to remove it when it is being saved on the USB ▪ Check if the USB is properly connected. ▪ Make sure that capacity display is accurate on the Record Page.
When product data is not displayed in the local network	<ul style="list-style-type: none"> ▪ Check the network cable's connection status. ▪ Press the reset switch on the back of the product for 5 seconds and factory initialize the product to check.

Specifications

Specifications	SNS-400	SNS-100	
Video Input	BNC(X4)	BNC(X1)	
Video Output	BNC(X1), Quad Display	BNC(X1), Loop Out	
Output Video Format	MPEG4 / MJPEG Selectable		
Output Resolution	NTSC : 704 x 480(D1), 704 x 240(Half D1), 352 x 240(CIF) PAL : 704 x 576(D1), 704 x 288(Half D1), 352 x 288(CIF)		
Frame Rate	Max 120 fps (CIF) Max 30 fps (D1)	Max 30 fps (D1, CIF)	
Video Compression Stage	5 stages (Very Low, Low, Middle, High, Very High)		
Audio Format	Bi-directional audio, 8KHz ADPCM		
Ethernet	10/100Mbps		
Protocol	HTTP, TCP/IP, PPPOE, FTP, SMTP, DHCP, DNS, DDNS, NTP		
Dynamic IP	Supports XDSL and DHCP		
DDNS	Supports DDNS		
Max, User	20 Users		
S/W	PC Viewer	Network Manager (DVR/Server/IPCam Integrated Manager S/W)	
	Web Page Web ActiveX Control	Embedded Web Server	
	SDK	Supports 3rd party SDK	
I/O Specs	Audio Input	Mini Jack(X4), Mono, Line or Mic level	Mini Jack(X1), Mono, Line or Mic level
	Audio Output	Mini Jack(X1), Mono	
	Ethernet	RJ-45 Connector(X1) : 10/100 Base Ethernet	
	Sensor Input	Terminal(X4)	Terminal(X2)
	Relay Output	Terminal(X4)	Terminal(X2)
	Serial Interface	RS-422/485 Terminal(X1), RS-232C Terminal(X1)	
	USB Port	USB 2.0 (Front, For Flash Memory Storage)	
Power source	DC12V±10%(AC Adapter included)		
Power consumption	App. 12W	App. 8W	
Operating Environment	-10℃ to +50℃ / 30% to 80% RH		
Dimensions	190mm(W) × 45mm(H) × 135mm(D)		
Weight (main frame)	App. 845g	App. 765g	
Accessories	<ul style="list-style-type: none"> - CD(X1) - I/O connector (X2) - AC adapter(X1) - AC power cord(X1) - User Manual(X1) - Wall Bracket(X2) - Ethernet Cross Cable(X1) 		

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